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ABSTRACT

The Professional Development Center Network (PDC), a consortium of twenty public school districts, parochial schools, and Western Kentucky University, seeks to identify and secure resources to assist in the design and delivery of activities appropriate to the educational development of individual staff members through the online Information Management System. This system will be utilized by members and staff of the PDC Network as a vehicle for matching the talents and expertise of resource personnel with staff development needs. Two major programs allow for entering and updating data and allow the user to retrieve information by any of the variables included in the information form. The input of personnel involved in utilizing resources available to provide for activities for staff development through the PDC Network was obtained in making the determination of the following categories of information to be gathered: (1) title of offering; (2) number of participants; (3) duration; (4) mode of presentation; (5) participant group; (6) content area; (7) demographic data; and (8) evaluation. The Resources for Staff Development Information Form, the data gathering instrument, will be distributed with an accompanying cover letter, reminding the participant of the PDC Network and requesting information. (Author/CWM)

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AN ON-LINE INFORMATION MANAGEMENT SYSTEM FOR RESOURCES FOR STAFF DEVELOPMENT FOR THE PROFESSIONAL DEVELOPMENT CENTER NETWORK

by

Eula Ewing Monroe

A Paper Submitted in Partial Fulfillment of
Requirements for Education 369:
Fundamentals of Automated Data Processing
Dr. R. Wilburn Clouse, Professor
George Peabody College
January 1979

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

IR007274

Acknowledgements

The on-line information management system for resources for staff development described in this paper was completed with the assistance of several individuals.

Of immense help in developing this system were people vitally connected with its utilization: Jack Neel, Director of Field Services, Western Kentucky University, and Director of the Professional Development Center Network; and Robert Cobb, Staff Assistant, Office of Educational Research, Western Kentucky University. These individuals spent much time in sharing ideas and needs and in discussing the system. In addition, Mr. Neel made available the map of the Professional Development Center Network and the chart of the PDC Network Administrative Organization.

James Becker, Director of the Jones-Jaggers Laboratory School, Western Kentucky University, and member of the College of Education Inservice Committee, shared ideas based on his work while at Florida State University in developing a computer-based system for cataloging teacher competencies.

The work of Joel Zamkoff, the College of Education Inservice Committee, Robert Cobb and others during the 1976-77 academic year in organizing for, collecting and storing information relative to staff development offerings laid the ground work for the development of this project.

The opinions of coworkers were informally solicited and are reflected in this information management system.

Teresa O'Shea, secretary for the Office of Field Services, Western Kentucky University, typed (using special equipment) the very-complicated-to-type Resources for Staff Development Information Form and the accompanying cover letter.

Diana Caillouet, friend and able typist, prepared the final draft of the remainder of the paper.

R. Wilburn Clouse, Professor, was most understanding of specific needs in relation to project completion.

To each of the above, thanks!

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AN ON-LINE INFORMATION MANAGEMENT SYSTEM FOR
RESOURCES FOR STAFF DEVELOPMENT FOR THE
PROFESSIONAL DEVELOPMENT CENTER NETWORK

The Professional Development Center Network: Background Information*

The Professional Development Center Network is a consortium of twenty public school districts, including parochial schools within the districts, the Jones-Jaggers Laboratory School of Western Kentucky University, and the College of Education, Western Kentucky University. There are 141 schools, over 2500 teachers, and more than 60,000 students within the Network. The area of the Network spans approximately 7200 square miles.

The consortium is funded by contributions from each participating school district at the rate of one dollar per average daily attendance unit (an a.d.a. unit is roughly equivalent to a little less than one student), but not in excess of $3000 per school district.

To facilitate effective educational programs relating to the specific personnel needs of the organizations within the consortium, the Network is organized into four Professional Development Centers (see map). Each

*Information concerning the Professional Development Center Network (PDC Network) is summarized from conferences with Jack Neel, Director of the Network, and from an unpublished paper authored by him entitled "Professional Development Center Network" (undated). See References.

center serves from four to seven school districts (see Professional Development Center Network Administrative Organization chart) and seeks the active collaboration of the participating organizations in utilizing a wide range of educational resources to meet specific staff development needs. Activities for staff development are cooperative designed and field-based.

The Network seeks to respond to the recognized need to work cooperatively to provide for the continuing professional development of all personnel who are responsible for developing and implementing instructional programs. Therefore, one major function is the identifying and securing of resources to assist in the design and delivery of activities appropriate to the educational development of individual staff members. It is to this function--the function of staff development--that the resource personnel file herein described is being developed. This on-line information management system will be utilized by members and staff of the PDC Network as a vehicle for matching the talents and expertise of resource personnel with staff development needs.

The Information Management System: Some Considerations

The on-line information management system for resource personnel represents an effort to update and systematize the collection, storage and retrieval of data for utilization by members of the Professional Development Center Network and by others interested in staff development.

Basic Requirements

In planning this information management system, consideration was given to three basic requirements: (1) information must be easily stored and readily accessed through a variety of indices, or "tag fields," thus allowing the user to be specific in the retrieval of information relative to need; (2) the data-gathering instrument for securing information from potential resource personnel must be thorough in regard to information needed but must be simple and fast to complete; and (3) the instrument must be designed in such a way as to serve as a source document for data entry.

Available Computer Facilities

Since the on-line information management system for resource personnel is in the pilot stages of development, current plans include the initial utilization of computer services available on the Western Kentucky University campus. These services are available to the PDC Network without charge and involve the utilization of a Digital Equipment Corporation PDP 11/45 computer system. There has been assured adequate disk storage capability and computer time for this project.

As the system develops and is utilized on a broader basis, serving more clientele than are currently identified, size, convenience, and administrative reasons may lead to consideration of the utilization of computer services available through the Kentucky Educational Computing Network (KECNET). The IBM 370/168 central processing unit is located on the University of Kentucky campus, and each state-supported university is allotted storage and computer time based on enrollment. On-line input and output units are available on each campus. These computer services

are provided without charge through the support of the Kentucky Council on Public Higher Education.

Programming Information

Two major programs will be written by Robert Cobb, Staff Assistant, Office of Educational Research, Western Kentucky University. The first, a data entry program, will allow for entering data and updating records at any time. Secondly, a search program will be written which will allow the user to retrieve information by any of the variables included in the data-gathering instrument, the information form. A very helpful feature of the search program which will extend the flexibility of the information management system will be the capability of the computer to search titles of offerings for any specific word or phrase the user requests and then to display and/or print out all titles of offerings in which that word or phrase appears.

Initially, for utilization of the Digital PDP 11/45 system, the programs will be written in BASIC-PLUS. Later, reprogramming for the IBM 370/168 system will utilize WATFIVE, a language similar to Fortran but with more flexibility, allowing for easy manipulation of string data consisting of alpha and numeric characters.

Output

Output will be available via visual display units and typewriter terminals housed in the Office of Educational Research. Hard copies will be made available as needed to users of the staff development resources.

The exact format for output is yet to be designed; it is planned that the title of offering will serve as the prime identifier for search

purposes and that the remaining information will be displayed or printed according to user request. The search program will be written in such a way that the data may be retrieved by a single variable or by any combination of the variables included in the data base. The discussions of the categories of information under the major heading Resources for Staff Development: Necessary Information identify the variables included in the data base.

Resources for Staff Development: Necessary Information

The input of personnel involved in utilizing resources available to provide for activities for staff development through the Professional Development Center Network (see Acknowledgements) was obtained in making the determination of the following categories or indices of information to be gathered: title of offering, number of participants, duration, mode of presentation, participant group, content area, demographic data and evaluation. Each of these categories is discussed separately in this section.

Title of Offering

The Title of Offering heading was used on the data-gathering instrument to identify the resource offering, giving the contributor the flexibility and initiative in determining the scope and content of topics offered. Instructions in the cover letter for the information form indicate that the title should delineate as specifically and as clearly as possible the content of the offering.

There will be the capability for retrieval by title of offering or by any words or phrases found in the title. For example, in the sample title of offering, "Some Uses of Cuisenaire Rods at the Primary Level," Cuisenaire Rods or Primary may constitute meaningful words/phrases for which a user might wish to request searches. (Perhaps not meaningfully, but also a capability would be the search for any titles having the word the.) A visual display and/or a hard copy of all offerings having these words or phrases would then be available to the user (see Programming Information).

Number of Participants

Since preparation--including the development of materials--and strategies for the presentation of an activity may necessarily vary according to the number of participants in the group, it is considered essential for the potential resource person to have opportunity to determine maximum and minimum numbers to be involved in a particular staff development offering.

Programming will allow for offerings to be retrieved by minimum and/or maximum number of participants. In addition, any other numbers may be used for retrieval, e.g., offerings for over 100 participants or offerings for 25 or fewer participants. This capability for retrieval by number may have significance when potential number of participants is of prime importance.

Duration

In planning for staff development activities, awareness of the length of each offering is of obvious practical importance. Staff development activities provided through the PDC Network are usually offered after

school. In these instances, two to three hours constitute one afternoon of involvement; three to six hours constitute two afternoons.

Western Kentucky University is one of a number of institutions now offering non-credit continuing education units, one CEU awarded for each "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction." (Western Kentucky University, 1974) As the concept of the utilization of CEU for credit gains acceptibility, staff development activities provided through the PDC Network will likely be considered for the awarding of college credit, particularly at the graduate level. For CEU purposes the need for available data on the length of offerings is inherent.

Programming will allow for retrieval by duration of offering, e.g., offerings one hour in length or offerings over three hours in length.

Mode of Presentation

Experience indicates that most staff development offerings are presented in one of three manners, or modes: the didactic, lecture or demonstration model; an interactive, discussion-type mode with involvement or "hands-on" activity; or in a self-directing, individualized setting. There is included on the data-gathering instrument space for insertion of any types of presentations not classifiable under one of these three modes.

Although it may not often be meaningful to retrieve information relative to resource offerings specifically by mode of presentation, this capability will be available.

Participant Group

Consultation with various knowledgeable staff development facilitators in the College of Education at Western Kentucky University and perusal of the Kentucky Department of Education School Data Form (1978-79) resulted in the categorizing of participant groups by the following widely recognized but not clearly defined assignments: teachers of exceptional education, early childhood teachers, primary teachers, intermediate teachers, teachers at the junior high/middle school level, secondary teachers, administrators and other support personnel (as supervisors, guidance counselors, librarians), and parents and community. In addition, space is provided for the insertion of a label for any participant group not identified in one of the aforementioned categories.

The duplication across some of the categories may be explained by the observation that there is no clear professional consensus regarding the range of grades or ages covered by the labels which are used for those categories.

The categories of participant groups are vital in describing the nature of the staff development offering; furthermore, capability for retrieval by category or categories of participant groups will facilitate the selection of offerings from those available which may be of particular assistance in meeting the needs of specific groups.

Content Area

The Content Area heading was used on the data-gathering instrument to include subject areas, general teaching skills or strategies, and professional concerns and issues. It is anticipated that many user requests will be stated as a subject area need, e.g., reading

or mathematics, and a search by that specific variable combined with participant group will yield a listing of offerings which should expedite the filling of staff development needs. Since some offerings do not fall within a specific subject area but may be a general teaching skill, as discipline, or a professional concern, as school finance, two additional categories were included.

The listing of content areas which follows represents a synthesis of the contributions of several faculty in the WKU College of Education and the classifications of subject areas from The Florida Catalog of of Teacher Competencies (Florida Department of Education, 1973) and the Kentucky State Plan for Accrediting Secondary Schools, Grades 7-12 (Kentucky Department of Education, 1970).

1. Adult Education
2. Agriculture
3. Alcohol/Drug Education
4. Art
5. Business Education
6. Career Education
7. Character Education
8. Consumer Education
9. Distributive Education
10. Driver Education
11. English
12. Environmental Education
13. Foreign Language
14. Guidance
15. Health/Safety

16. Home Economics
17. Industrial Arts
18. Language Arts
19. Mathematics
20. Media Services
21. Music
22. Physical Education
23. Reading
24. Science
25. Social Studies
26. Speech/Drama
27. Technical Education
28. Trade and Industrial Education
29. General Teaching Skills/Strategies
30. Professional Concerns/Issues (e.g., school finance)
31. Other (specify)

For the following reasons, the content area is coded: (1) to expedite contributor response to the information form; (2) to facilitate data entry into the computer system; and (3) to save space on the data-gathering instrument. The contributor is asked to code all content areas which apply to the title of the offering, and to specify any content area not classifiable under the categories given.

Demographic Data

The following information from each contributor appears necessary for information and contact purposes: name, position, place employed, work address, and phone number (work and home).

Of particular interest to the Professional Development Center Network

is the assembling of resource offerings from a broad base of contributors in a variety of fields and with a wide array of expertise. Once the information forms are returned, the demographic data will be utilized to store and retrieve resource offerings by name of contributor and by type of employment--public school. higher education, state department, or other. The type of employment will be coded by the data entry clerk and can be inferred from Place Employed as indicated on the information form.

Evaluation

At this point in the design of the information management system for resource personnel, no systematic procedures for evaluation have been developed which allow for ready input into a computer-based system. One possible solution may involve the development of an instrument which elicits a limited number of basic evaluative responses. These responses can be coded by each participant in a staff development activity on a Porta-Punch card and then entered through batch processing into the data base. If/when this system is activated, the appropriate evaluative information will be linked to each specific offering, and a summary of the participant responses will be available on-line for consideration when filling requests for staff development activities.

The Cover Letter: Its Purposes

The cover letter (see page 16) prepared for the Director of the Professional Development Center Network by this writer is multipurpose in nature. Its purposes are: to remind the recipient of the nature of

the staff development services available through the PDC Network; to communicate the need for the information requested on the accompanying form; to specify details in submitting the information; and to briefly introduce the advantages of a computerized information management system for resource personnel.

The Form for Data Gathering: Next Steps

The Resources for Staff Development Information Form was developed by this writer to serve as the data-gathering instrument and the source document for the on-line information management system discussed in this paper. The "initial final draft" as presented on page 19 incorporates the results of a synthesis of ideas (see Acknowledgements and References) and has been tentatively approved by the Director of the Professional Development Center Network and by personnel in the Office of Educational Research.

Revision of Form

In January, 1979, the College of Education Inservice Committee will consider the adequacy and appropriateness of the form and will forward suggestions for revision. These revisions will be incorporated as applicable before distribution.

Form Distribution

The information form and accompanying cover letter will be distributed college-wide through the Dean's Administrative Council; it will reach public school personnel through the Advisory Councils of the PDC Network (see Professional Development Center Network Administrative

Organization chart); it will be distributed at the state level through the State Department of Education; and it will reach other potential resource personnel through less systematic or incidental arrangements.

Form Return

It is hoped that the potential resource personnel for staff development offerings are effectively reached and are sufficiently motivated to return the completed information form promptly through the channel as specified by the cover letter. However, reality leads one to acknowledge that the expected return rate may be low and that efficient follow-up procedures will need to be developed. Personnel within the office of the Director of the PDC Network will assume responsibility for designing and implementing follow-up procedures.

Data Entry

When completed and returned to the office of the Director of the PDC Network, the Resources for Staff Development Information Form will serve as the source document for on-line data entry through a visual display unit. A secretary from the office of the Director who is familiar with the nature of staff development offerings and who will be assisting in filling requests for staff development activities will serve as data entry clerk. The data entry computer program will allow for entering data as it is received and for updating records as new data is gathered.

Information Accessibility

Information will be accessible as needed for utilization by members of the PDC Network and by others interested in staff development activities.

Form Design: Selected Sources

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Western Kentucky University. Continuing education. Bowling Green: Author, October 1974.

P D N C
Professional Development Center Network
Suite 427, College of Education, Western Kentucky University
Bowling Green, Kentucky 42101, Phone (502) 745-2451

Dear Colleague:

The Professional Development Center Network is in the process of developing an information management system for resource offerings which will update our available listings and allow for ready access to information to fill staff development requests. When the system is implemented, persons and/or organizations wishing to utilize the resources available through the PDC Network may request by topic or by content area and receive a listing of all relevant offerings.

Please complete the accompanying form, entering information for each of the offerings you will be willing to present as a staff development activity. The titles you submit should reflect as succinctly and as clearly as possible the content of your offerings. The completed form should be returned to our office:

Suite 427, College of Education
Western Kentucky University
Bowling Green, KY 42101

Your contributions are important to the success of this undertaking. If you have questions, please call me at 745-2451; and I will be happy to assist you and discuss the details of this project with you.

Very truly yours,

Jack Neel

Jack Neel
Director

tao

Enclosure

RESOURCES FOR STAFF DEVELOPMENT
INFORMATION FORM

Title of Offering(s)	Participants (No. of)		Duration (in hours)	Mode of Presentation (Check block which applies)				Participant Group (Check all which apply)										Content Area
	Maximum	Minimum		Lecture/ Demonstration	Interaction/ Discussion/ Involvement	Self-directing/ Individualized	Other (specify)	Exceptional Ed.	Early Childhood	Primary	Intermediate	Jr. High/Middle	Secondary	Administrators/ Support Personnel	Parents/ Community	Other (specify)		(*Code all which apply)
(Sample) Some Uses of Cuisenaire Rods at the Primary Level	25	5	1.5		X			X	X	X								19
(Explanation of Sample: This is a 1 1/2 hour involvement-type workshop for teachers of exceptional, early childhood, and primary students in the area of mathematics. There should be no more than 25 and no fewer than 5 participants.)																		
1.																		
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		

*Code No.	Content Area	Code No.	Content Area	Code No.	Content Area	Code No.	Content Area
1	Adult Ed.	10	Driver Ed.	19	Mathematics	28	Trade & Industrial Ed.
2	Agriculture	11	English	20	Media Services	29	General Teaching Skills/ Strategies
3	Alcohol/Drug Ed.	12	Environmental Ed.	21	Music		
4	Art	13	Foreign Language	22	Physical Ed.	30	Professional Concerns/Issues (e.g., school finance)
5	Business Ed.	14	Guidance	23	Reading		
6	Career Ed.	15	Health/Safety	24	Science	31	Other (specify)
7	Character Ed.	16	Home Economics	25	Social Studies		
8	Consumer Ed.	17	Industrial Arts	26	Speech/Drama		
9	Distributive Ed.	18	Language Arts	27	Technical Ed.		

Name _____

Position _____

Place Employed _____

Address (work) _____

Phone (work) _____ (home) _____

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